

Laucks® Testing Laboratories, Inc.

940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT: Alaskan Copper Works
628 S. Hanford
Seattle, WA 98134

ATTN : Gerald Thompson

Work ID : Metro Verification
Taken By : Client
Transported by: Hand Delivered
Type : Water

Certificate of Analysis

Work Order# : 92-07-B27
DATE RECEIVED : 07/21/92
DATE OF REPORT: 07/30/92
CLIENT JOB ID : M25336

SAMPLE IDENTIFICATION:

	Sample	Description
01	No Id	

FLAGGING:

The flag "U" indicates the analyte of interest was not detected, to the limit of detection indicated.

ATTACHMENTS:

Following presentation of sample results, the following appendices are attached to this report:

Appendix A: Method Blank Report
Appendix B: MS/MSD Report

Unless otherwise instructed all samples will be discarded on 09/10/92

Respectfully submitted,
Laucks Testing Laboratories, Inc.

J. M. Owens
J. M. Owens

RECEIVED
AUG 3 1992



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Chemistry, Microbiology, and Technical Services

CLIENT : Alaskan Copper Works

C e r t i f i c a t e o f A n a l y s i s

Work Order # 92-07-B27

TESTS PERFORMED AND RESULTS:

Analyte	Units	<u>01</u>
Chromium (Method 218.1)	mg/L	1.3
Copper (Method 220.1)	mg/L	0.64
Nickel (Method 249.1)	mg/L	1.2
Zinc (Method 289.1)	mg/L	1.9



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APPENDIX A

Method Blank Report



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Quality Control Report Method Blanks for Work Order 9207827

Blank Name	Samples Verified	Test Description	Result	Units	Control
					Limit
B072792_FAA_W02	1	Cadmium by AA	0.0020 U	mg/L	0.0040
		Iron by AA	0.050 U		0.25
		Manganese by AA	0.0020 U		0.0040
		Lead by AA	0.010 U		0.020
		Silver by AA	0.0020 U		0.0040
		Zinc by AA	0.0050		0.010
		Copper by AA	0.0020 U		0.0040
		Nickel by AA	0.010 U		0.020
		Chromium by AA	0.0050 U		0.010
		Aluminum by AA	0.020 U		0.040
		Barium by AA	0.020 U		0.040

A method blank can validate more than one analyte on more than one work order. The method blanks in this report may validate analytes not determined on this work order, but nonetheless determined in the associated blank.

Because they validate more than one work order, method blank results are not always reported in the same concentration units used for sample results.

* = blank exceeds control limit



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APPENDIX B

Matrix Spike/Matrix Spike Duplicates Report



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Chemistry, Microbiology, and Technical Services

Quality Control Report
MS/MSD Report for Work Order 9207827

MS/MSD Name	Sample Fractions Verified	MS/MSD Sample	Analyte	Percent Recovery			Cont. Limits		
				MS	MSD	RPD	LCL	UCL	RPD
K072792_FAAW01	1	9207690-29	Cadmium	102	100	2	62	118	17
			Iron	98	98	0	50	150	30
			Aluminum	96	98	2	65	130	17
			Barium	99	98	1	63	130	30
			Manganese	104	102	2	56	117	15
			Lead	110	108	2	65	118	14
			Silver	102	100	2	57	119	25
			Zinc	102	98	4	50	123	24
			Copper	100	98	2	62	119	28
			Nickel	98	99	1	62	117	13
			Chromium	104	102	2	55	124	23

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
LCL = Lower Control Limit
UCL = Upper Control Limit
-1 for recovery value indicates that recovery could not be calculated

An MS/MSD pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this MS/MSD report.



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